

NOORUL ISLAM CENTRE FOR HIGHER EDUCATION

(Declared as Deemed-to-be-University under Section 3 of the U.G.C. Act 1956)

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Establishment of Research & Development Cell (RDC)



As per the Directives of

UNIVERSITY GRANTS COMMISSION (UGC)'s

Notification

UGC Formulates Guidelines for Research and Development Cells

Establishment at HEIs,

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Establishment of Research & Development Cell (RDC) in Noorul Islam Centre for Higher Education (NICHE)

Preamble

One of the major contributions of Higher Educational Institutions (HEIs) including colleges and universities is the new innovative and advanced knowledge that is required to enhance the quality of living of mankind through the pursuance of research. In line with this imperative, research is given highest priority in NICHE. Besides imparting education to the students and scholars, in NICHE through the Board of Research Development and Consultancy (BRDC) high degree of researches are pursued. In NICHE, the operation of BRDC is carried out intensively by promoting research and supporting the patenting of intellectual properties through BRDC. Time and again, several advancements are effectual in NICHE like formulating stringent rules through BRDC for improving the quality of research and collaborating with external institutions like industries and research laboratories. In line with these endeavors and in response to directions of the University Grants Commission (UGC) the establishment of Research and Development Cell (RDC) in HEIs, active initiatives have been taken at NICHE with the primary goal of promoting high quality research. In this backdrop, the Board of Management (BOM) of NICHE has approved the establishment of RDC. The formation and operation of RDC at NICHE, by following the guidelines of UGC, are explained in the following sections.

Introduction

The National Education Policy 2020 (NEP-2020), emphasizes the attainment of high degree of quality in the researches pursued at HEIs. In order to meet this requirement, RDC has been established at NICHE. Further, infrastructure and mechanisms for the autonomous working of RDC have been developed at NICHE. These operational activities will enable NICHE to contribute towards attaining Atma-Nirbhar Bharat (Self-Reliant India). Three ingredients namely research, innovation and technology development are required to be developed by RDC of NICHE towards attaining Atma-Nirbhar Bharat. Such endeavours by the RDC of NICHE will lay the foundation for pursuing high quality research. In order to be active, the RDC of NICHE will support the development of research ecosystem. The elements of the ecosystem which will support the establishment and operation of the RDC by NICHE are briefly presented in the following sections.

Vision

To put in place fool-proof rules and procedures for developing and operating the research ecosystem within NICHE.

Mission

- To promote a conducive environment for enhancing research productivity and improving the quality of research.
- To interact and share expertise across industry, government, community based organizations, and agencies at regional, national, and international levels.
- To take research towards meeting the international requirements through mobilization of resources and funding.

Objectives

- i.** To build a well-defined organizational structure for the RDC with a list of roles of the personnel, prepare Research Policies for NICHE, identify thrust areas of research, and create related forums/cluster groups/ frontline teams/consortia of researchers.
- ii.** To install a bias-free and transparent system for formulating Research Policies, recruiting research personnel, procuring equipment, and granting adequate finance with appropriate autonomy to the Principal Investigator(s) and disseminating research outcomes to stakeholders and the society at large.
- iii.** To establish an effective mechanism, to support researchers and innovators for identifying potential collaborators from industry, research organizations, academic institutions and other stakeholders for pursuing collaborative research and outcome based partnerships.
- iv.** To act as a facilitator among researchers and relevant research funding agencies, offer support towards the preparation and submission of project proposals and monitor the projects with respect to the effectiveness of the research and adherence to timelines.
- v.** To make integrated efforts for ensuring the usefulness and nourishments of the research outcomes by coordinating among other cells/centers/divisions/councils dealing with University-Industry Inter Linkage, Incubation, Innovation and Entrepreneurship Development and Intellectual Property Rights (IPRs).
- vi.** To install a system supported by information and communication technology for developing, maintaining and updating the internal research depository containing the data and the information about the personnel working at NICHE for improving the quality of research, prompting industrial consultancy and offering services to the industry, individuals and society at large.
- vii.** To nourish the expertise of human resources to the maximum possible extent by engaging and utilizing the services of superannuated active faculty members/scientists in research capacity building of talented young minds and promoting mobility of researchers across institutions and R&D laboratories
- viii.** To act as a nodal center for ideation and conceptualization of research topics/themes by conducting workshops, awareness programs and training programs and ensuring

the integrity and ethical practices in research activities including clearance by various committees especially bioethical committee wherever required.

Functions

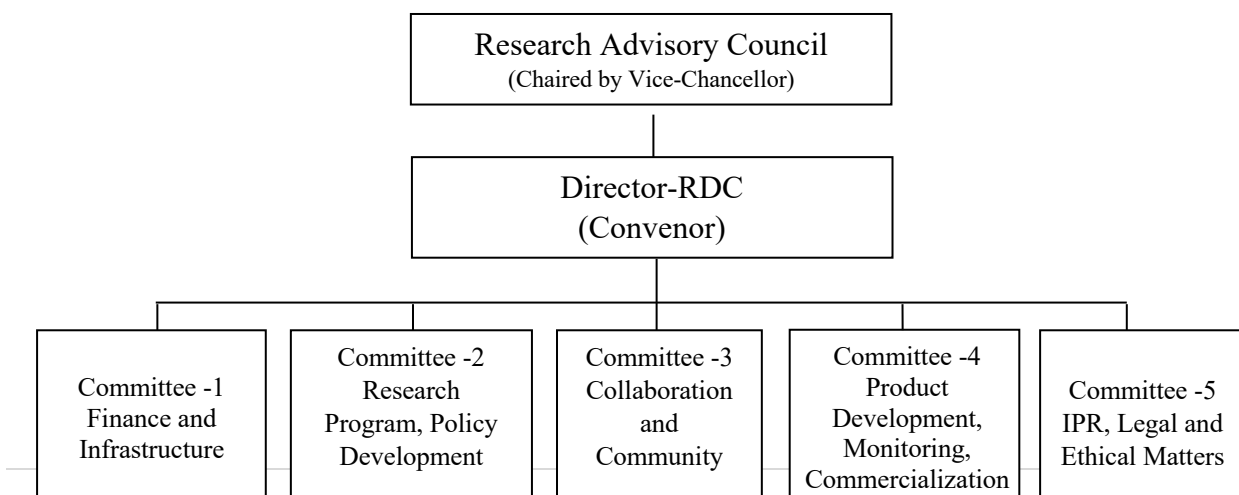
In line with the guidelines provided by the UGC, the RDC of NICHE will function with the mandate for promoting quality research that contributes meaningfully towards the goal of a self-reliant India ("Atma-Nirbhar Bharat"), aligned with the provisions of NEP-2020.

The RDC of NICHE will be operated with the mandate for creating a research ecosystem for reliable, impactful, and sustained research output. The essential contributions of such an ecosystem, are generation of knowledge and facilitation of research, innovation and technology development for reaping industrial and societal benefits. Human resource (researchers and faculty members), intellectual capital (knowledge and skills), governance (regulations and policies) and financial resources (funding by the agencies and grants released by the Management, Government, and Non-Governmental Organizations (NGOs) facilitate the reaping of such industrial and social benefits.

1. Governance

An efficient mechanism has been developed at NICHE for creating a conducive research environment to ensure functional autonomy, transparency, accountability and adaptability and thereby strengthening inter-linkages while governing RDC.

The NICHE will foster the human elements (faculty members, staff members, scholars, and students), logistics (land, buildings, and facilities), knowledge resources (research equipment, project utilities and consumables), fund flow, etc., through a steady, proficient, effective governance (rules, regulations, norms, procedures and policies) and financial (grants and funds) management of RDC. Dedicated leadership and administrative structure for research, led by experienced researchers, are incorporated for establishing an effective and robust research governance in RDC at NICHE. The organizational structure of RDC comprising various committees for carrying out specified functions at NICHE are shown below:



The research governance is carried out by a Research Advisory Council (RAC) BRDC of NICHE will serve as RAC which is headed by the Vice-Chancellor of NICHE is the apex body of RDC. The Director nominated by the Vice-Chancellor from among the distinguished researchers of the NICHE, will head the various committees to carry out the governance. RDC may form multiple committees to smoothen its functioning with respective committee members nominated by the Director–RDC and approved by the RAC.

2. Administration

Established organizational structure represented by (Authorities, Bodies, and Committees) facilitates planning, implementation, and monitoring of research activities in NICHE, formulating rules, regulations, norms, procedures, guidelines and policy frameworks for utilization of facilities and resources at NICHE. A strategy adopted to integrate multiple functional units at NICHE supports institutional research through RDC under a single-window operational system for effective administration. The activities of RDC of NICHE are mentored and monitored by appropriate committees for devising research models, technology appraisal, foresight and review functions, mediating sectorial R&D progress, and Intellectual Property Rights (IPRs) protection. RDC of NICHE will keep a close contact with relevant Innovation Cell to make use of various innovative plans for facilitating the researchers.

3. Research Ecosystem/Collaboration

A vibrant research ecosystem prevailing through the operation of RDC in NICHE aims to provide meaningful thrust for sustainable research and innovation and promote collaboration with government, universities, research institutes and industries.

Through the establishment of RDC, the NICHE has built a sustainable research ecosystem that leads to consistent quality research outcomes and enhanced productivity.

Efforts will be made to collaborate with RDCs of other institutions so as to continuously improve the functioning of RDC at NICHE.

RDC in NICHE will act as a facilitator for networking and pursuing collaborative research with other national and international institutions working in inter- disciplinary, trans-disciplinary, and multidisciplinary research areas. Reformed administrative structure of RDC at NICHE will facilitate to reach out to key industry players, research organizations, institutions, associations, NGOs and Government bodies for forging strategic partnerships.

The RDC of NICHE will establish collaborations, teams/consortia, partnerships, and combined ventures for pursuing joint research activities through

clustering institutions and organizations to facilitate the exchange of students, scholars, staff and faculty members.

Resource sharing in content and infrastructure will strengthen the research activities carried out both within NICHE and with the collaboration of universities, funding agencies, industries, corporates and governments.

4. Information Management System

As part of establishing RDC, Research Information Management System (RIMS) has been installed for enabling NICHE to play a key role in the advancement of research and innovation as two distinct entities which will be of benefit to faculty members, staff members, students, industry and other stakeholders.

NICHE has put in place the RIMS to collect and manage research-oriented information, databases, publications, research projects, fellowships, collaborations, patents, thrust areas, innovations etc., aligned with the institution's research policies.

RIMS of NICHE provides a platform for accessing resource-centric information pertaining to human capital (expertise), physical capital (State-of-the-Art Research Laboratories and Sophisticated Instrumentation Facility), and knowledge capital (Digital Library and Information, Intellectual Property Facilitation, Quantitative Methods and Data Analysis, Analytical and Consultancy Services).

At NICHE, as per the requirements of various regulatory agencies, researchers are required to submit, modify, or update their research compliances such as protocol approval, training records, equipment lists, etc.

RIMS installed at NICHE provides a centralized and integrated database to manage issues related to radioactive-safety approval clearances for use and disposal of biological, chemical and radioactive hazardous materials, protective equipment measures, surveillance of staff, appropriate training programmes/workshops, etc.

NICHE has created a portal for Institutional Research Information and Institutional Repository and has signed an MoU with UGC- INFLIBNET to access and upload the research information through ShodhGanga, ShodhGangotri, ShodhSindhu, ShodhShuddhi, and ShodhChakra.

At NICHE, the Innovation Management (ISO 56002: 2019) will be implemented soon as a common framework to develop and deploy innovation capabilities, evaluate performance, and achieve intended outcomes of adopting global standards.

5. Human Resources

The Director (RDC), the Conveners and members of various committees (nominated by the Director-RDC from/among the existing faculty members with research credentials) and supporting administrative/technical staff members would ensure smooth conduct of the research activities in NICHE.

At NICHE, a resilient research ecosystem has been built by reemploying or designating superannuated faculty/scientists with exceptional research profiles and eminent faculty as Mentors/ Scientists/ Professor Emeritus on a selective basis.

At NICHE, efforts are made to avail the services of distinguished faculty members with research credentials and research scientists for grooming young researchers so that the void created as a result of superannuated retired faculty members /researchers is replenished.

6. Research Promotion and Guidance

Research promotion activities carried out through RDC at NICHE are aligned with the mandates of various National Missions, SDGs and Start-up India leading to a Self-Reliant India (Atma-NirbharBharat).

Research Guidance from RDC aims to encourage faculty members of NICHE to conceive ideas through enhanced industry-academia interactions and to prepare research proposals for funding from various agencies.

Events like capacity-building programs facilitating the learning of Research Methodology, Research Techniques, Publication and Ethics and specific research theme-based workshops and research internships are organized through RDC at NICHE to motivate the end-users (students, scholars, and faculty members) to participate actively in the process of ideation and innovative research in emerging areas.

a. Research Thrust and Clustered Areas

Through the operation of RDC, thrust areas for research in NICHE will be identified, underpinning the societal needs and the availability of key resources, including in-house human resources, faculty research competencies, and support systems. In due course of time, NICHE will consider establishing Centers of Excellence (CoE) in identified contemporary areas of research.

Research Clusters and Regional Research Consortia to be formed by RDC of NICHE will bring all researchers, faculty members, students, scholars, and Post-Doctoral Fellows for joint high value (interdisciplinary and trans-disciplinary) research projects to avail National and International funding opportunities.

The infrastructure and expertise to be shared by RDC of NICHE enable cross-fertilization of ideas and mobilization of resources. Further, forming Regional Research Consortia at NICHE through the operation of RDC will add synergistic advantage in finding solutions in inter-disciplinary, trans-disciplinary, and multidisciplinary areas.

The Centre of Excellence (CoE's) to be established will serve as Incubation Centres at NICHE to transform innovative ideas into processes and products. Such endeavors will be administered and monitored by the RDC. RDC also provides an

avenue for cooling and sharing community talent with prior learning/expertise to engage in research and innovation activities of NICHE.

b. Research Incentives and Recognitions

Incentives play a significant role in triggering and catalyzing research interest among scholars and faculty members. Incentivizing quality publications and patents by students and faculty members will have an enduring positive impact.

Excellence Awards for accomplishments/achievements in the form of impactful quality research and research-based teaching are instituted by the RAC of RDC further stimulating and invigorating the research and innovation activities of NICHE.

RDC of NICHE has developed a policy focusing on identifying specific incentives for research faculty members and developing a unique research career ladder for strengthening the mission of RDC of NICHE.

c. Technology Development and Business Centred Facility

Through the establishment of RDC, the Technology Development and Business-Centered Facility (TDBCF) has been developed at NICHE. This TDBCF will be a hub for strategic partnerships/ collaborations, industry-institute interface, sponsored research contract research, consultancy research, new knowledge generation, IPR, and patent services, venture capital, trade/market portfolio, technology transfer, and commercialization of research to facilitate innovation, incubation, entrepreneurship and start-up ventures.

d. Finance

RDC of NICHE will facilitate resource mobilization and create a corpus for research and development seeking such industries, and other sources and channelize Corporate Social Responsibility (CSR) funds for sustenance and furtherance of research activities.

Apart from creating a corpus fund exclusively for R&D, RDC of NICHE will explore venture capitalists and angel investors for funding research and innovation. The RDC of NICHE will liaise with funding agencies, and track funding opportunities from industrial consortia.

The NICHE may make provision for research in the annual budget, subject to the availability of funds. The corpus created at NICHE for research could also support the seed funding for freshly recruited faculty members for developing research facilities, carrying out publications, execution of projects and patenting.

7. Integrity and Ethics

Regular initiatives by RDC of NICHE ensure that researchers understand the importance of integrity and ethics, and comply with ethical codes of research and publishing practices at institutional, national, and global levels.

A standard plagiarism checking mechanism has been mandatorily implemented at NICHE with the requisite software. All the research papers and related documents are subjected to plagiarism check at NICHE by using Urkund and Ithenticate software platforms.

On continual basis, the RDC of NICHE sensitizes the research community about dubious research and publishing practices and predatory journals.

8. Capacity Building

RDC of NICHE plays a crucial role in building the capacity of faculty members and students to undertake research problems in line with the latest advances in diverse disciplines to push the boundaries of knowledge through publications and contributions towards achieving technological developments that are relevant to societal needs.

RDC also paves the way for NICHE to attract more research grants under norm-based funding, improve its accreditation and NIRF ranking and enhance the brand image of NICHE. Regular events such as refresher courses, workshops, training programmes, internships, faculty development programs, staff development programs, group discussions and seminars/conferences are organized for capacity building of faculty members and students.

RDC plays a pivotal role in creating central R&D facilities with the provisioning of associated training programmes and internships.

9. Research Monitoring

The current policy environment in India encourages HEIs to be responsible and accountable for research, development and innovation activities through the creation of infrastructure, generation of resources, promotion of business, and facilitation of policy framework to nurture the culture of pursuing quality research by adhering to ethical practices.

In order to fulfill these requirements, among the standard functions, the RDC in NICHE monitors and oversees research progress, coordinates programmes, manages and facilitates optimizing resources, timely reviewing of research activities for completion of projects as per schedule.

From time to time, efforts will be made through RDC to formulate and adhere to specific quality benchmarks for ensuring that the quality of researches pursued at NICHE meets the stipulations by global/ international standards.

The RDC of NICHE conducts quality review (SWOC Analysis) and internal evaluation of the research papers and suggests publishing papers in Scopus Indexed, Web of Science (SCI/SCIE), or UGC-CARE recognized journals.

RDC of NICHE ensures that all the Research Laboratories in the institution fulfill the norms of Good Laboratory Practices (GLP) and Safety (Bio and Chemical) measures and makes efforts to get recognition as QIP center from the National Accreditation Board of Laboratories (NABL).